

Title (en)

ASSAYS FOR DETERMINING PLASMA KALLIKREIN SYSTEM BIOMARKERS

Title (de)

ASSAYS ZUR BESTIMMUNG VON PLASMAKALLIKREINSYSTEM-BIOMARKERN

Title (fr)

ANALYSES POUR DÉTERMINER LES BIOMARQUEURS D'UN SYSTÈME DE KALLICRÉINE PLASMATIQUE

Publication

EP 3808857 A1 20210421 (EN)

Application

EP 20197583 A 20141017

Priority

- US 201361893505 P 20131021
- US 201461939837 P 20140214
- EP 14856778 A 20141017
- US 2014061247 W 20141017

Abstract (en)

Methods and assays for determining the activation level of the plasma kallikrein (pKal) system and the uses thereof for assessing the activity of pKal modulators on the pKal system.

IPC 8 full level

C12Q 1/37 (2006.01); **C12Q 1/56** (2006.01)

CPC (source: EP IL KR US)

A61P 7/10 (2017.12 - EP); **A61P 29/00** (2017.12 - EP); **A61P 43/00** (2017.12 - EP); **C07K 14/755** (2013.01 - KR); **C07K 16/36** (2013.01 - EP IL US); **C07K 16/40** (2013.01 - IL US); **C12Q 1/37** (2013.01 - EP IL KR US); **C12Q 1/56** (2013.01 - EP IL KR US); **C12Y 304/21034** (2013.01 - IL); **C12Y 304/21038** (2013.01 - IL); **G01N 33/573** (2013.01 - IL KR); **G01N 33/6893** (2013.01 - IL KR US); **A61K 2039/505** (2013.01 - IL US); **C07K 2317/76** (2013.01 - IL US); **C12Y 304/21034** (2013.01 - EP US); **C12Y 304/21038** (2013.01 - EP US); **G01N 2333/4713** (2013.01 - IL US); **G01N 2333/96411** (2013.01 - KR); **G01N 2333/96455** (2013.01 - EP IL US); **G01N 2333/96458** (2013.01 - EP IL US); **G01N 2500/02** (2013.01 - EP IL US); **G01N 2500/20** (2013.01 - EP US); **G01N 2800/224** (2013.01 - EP IL KR US); **G01N 2800/50** (2013.01 - EP US); **G01N 2800/52** (2013.01 - EP IL KR US)

Citation (applicant)

- WO 9521601 A2 19950817 - PROTEIN ENG CORP [US], et al
- WO 03103475 A2 20031218 - DYAX CORP [US], et al
- US 5260203 A 19931109 - LADNER ROBERT C [US], et al
- US 4946778 A 19900807 - LADNER ROBERT C [US], et al
- US 4881175 A 19891114 - LADNER ROBERT C [US]
- US 6407213 B1 20020618 - CARTER PAUL J [US], et al
- US 5693762 A 19971202 - QUEEN CARY L [US], et al
- US 2004152633 A1 20040805 - JORGENSEN MARIANNE ULRICH [DK], et al
- US 5795865 A 19980818 - MARKLAND WILLIAM [US], et al
- US 6057287 A 20000502 - MARKLAND WILLIAM [US], et al
- US 2012201756 A1 20120809 - SEXTON DANIEL J [US]
- US 2011200611 A1 20110818 - SEXTON DANIEL J [US]
- US 5994125 A 19991130 - MARKLAND WILLIAM [US], et al
- US 6333402 B1 20011225 - MARKLAND WILLIAM [US], et al
- US 7628983 B2 20091208 - MARKLAND WILLIAM [US], et al
- US 8283321 B2 20121009 - MARKLAND WILLIAM [US], et al
- US 7064107 B2 20060620 - LADNER ROBERT C [US], et al
- US 7276480 B1 20071002 - LADNER ROBERT C [US], et al
- US 7851442 B2 20101214 - LADNER ROBERT C [US], et al
- US 8124586 B2 20120228 - LADNER ROBERT C [US], et al
- US 7811991 B2 20101012 - LADNER ROBERT C [US], et al
- US 2011086801 A1 20110414 - LADNER ROBERT C [US], et al
- SAINZ I.M. ET AL., THROMB HAEMOST, vol. 98, 2007, pages 77 - 83
- ZURAW B.L. ET AL., N ENGL J MED, vol. 359, 2008, pages 1027 - 1036
- RUSTANDI ET AL.: "Qualitative and quantitative evaluation of SimonTM, a new CE-based automated Western blot system as applied to vaccine development", ELECTROPHORESIS, vol. 33, no. 17, September 2012 (2012-09-01), pages 2790 - 7, XP055688276, DOI: 10.1002/elps.201200095
- WACHTFOGEL, Y.T. ET AL., BLOOD, vol. 73, 1989, pages 6.3.1 - 6.3.6
- VELOSO, D. ET AL., BLOOD, vol. 70, no. 4, 1987, pages 1053 - 62
- KAUFMAN, N. ET AL., BLOOD, vol. 77, no. 12, 1991, pages 2660 - 2667
- HARPEL, P.C. ET AL., J BIOL CHEM, vol. 260, no. 7, 1985, pages 4257 - 63
- KERBIRIOU-NABIAS, D.M., BR J HAEMATOL, vol. 56, no. 2, 1984, pages 2734 - 86
- REDDIGARI, S.R.KAPLAN, A.P., BLOOD, vol. 74, 1999, pages 695 - 702
- SCOTT, C.F. ET AL., THROMB RES, vol. 48, no. 6, 1987, pages 685 - 700
- GALLIMORE, M.J. ET AL., THROMB RES, vol. 114, no. 2, 2004, pages 91 - 96
- BUHLER R. ET AL., BLOOD COAGUL FIBRINOLYSIS, vol. 6, no. 3, 1995, pages 223 - 232
- RUSTANDI ET AL., ELECTROPHORESIS, vol. 33, no. 17, September 2012 (2012-09-01), pages 2790 - 7
- WILDT ET AL., EUR J IMMUNOL., vol. 26, no. 3, 1996, pages 629 - 39
- KABAT, E.A. ET AL.: "Sequences of Proteins of Immunological Interest", 1991, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
- CHOTHIA, C. ET AL., J. MOL. BIOL., vol. 196, 1987, pages 901 - 917, Retrieved from the Internet <URL:www.hgmp.mrc.ac.uk>
- GIRARD, T. ET AL., NATURE, vol. 338, 1989, pages 518 - 520
- BIRD ET AL., SCIENCE, vol. 242, 1988, pages 423 - 426
- HUSTON ET AL., PROC. NATL. ACAD. SCI. USA, vol. 85, 1988, pages 5879 - 5883
- KAPLAN, A.P., J ALLERGY CLIN IMMUNOL, vol. 126, no. 5, 2010, pages 918 - 925
- MCMILLAN, C.V. ET AL., PATIENT, vol. 5, no. 2, 2012, pages 113 - 26
- EIGENBROT ET AL., PROTEIN ENGINEERING, vol. 3, no. 7, 1990, pages 591 - 598

- HYNES ET AL., BIOCHEMISTRY, vol. 29, 1990, pages 10018 - 10022
- KIDO ET AL., J. BIOL. CHEM., vol. 263, no. 34, 1988, pages 18104 - 18107
- NOVOTNY ET AL., J. BIOL. CHEM., vol. 264, no. 31, 1989, pages 18832 - 18837
- SPRECHER ET AL., PNAS USA, vol. 91, 1994, pages 3353 - 3357
- "Pfam", Database accession no. PF00014
- SONHAMMER ET AL., PROTEINS, vol. 28, no. 3, 1997, pages 405 - 420
- GRIBSKOV ET AL., METH. ENZYMOL., vol. 183, 1990, pages 146 - 159
- GRIBSKOV ET AL., PROC. NATL. ACAD. SCI. USA, vol. 84, 1987, pages 4355 - 4358
- KROGH ET AL., J. MOL. BIOL., vol. 235, 1994, pages 1501 - 1531
- STULTZ ET AL., PROTEIN SCI., vol. 2, 1993, pages 305 - 314
- SCHULTZ ET AL., PROC. NATL. ACAD. SCI. USA, vol. 95, 1998, pages 5857
- SCHULTZ ET AL., NUCL. ACIDS RES, vol. 28, 2000, pages 231
- R. DURBIN ET AL.: "Biological sequence analysis: probabilistic models of proteins and nucleic acids.", 1998, CAMBRIDGE UNIVERSITY PRESS
- CORPET ET AL., NUCL. ACIDS RES., vol. 27, 1999, pages 263 - 267
- ALTSCHUL ET AL., NUCLEIC ACIDS RES., vol. 25, 1997, pages 3389 - 3402
- GOUZY ET AL., COMPUTERS AND CHEMISTRY, vol. 23, 1999, pages 333 - 340
- FALQUET ET AL., NUCLEIC ACIDS RES., vol. 30, 2002, pages 235 - 238
- KAUFMAN ET AL., BLOOD, vol. 73, pages 2660 - 2667

Citation (search report)

- [XYI] WO 2012170945 A2 20121213 - ISIS PHARMACEUTICALS INC [US], et al
- [A] US 6913900 B2 20050705 - KAPLAN ALLEN P [US], et al
- [A] US 6242210 B1 20010605 - BJOERCK LARS [SE], et al
- [XI] US 2011154517 A1 20110623 - DEWALD GEORG [DE]
- [A] US 4985354 A 19910115 - TOYOMAKI YOSHIO [JP], et al
- [A] EP 0210029 A2 19870128 - UNIV TEMPLE [US]
- [XI] REDDIGARI S ET AL: "Quantification of human high molecular weight kininogen by immunoblotting with a monoclonal anti-light chain antibody", JOURNAL OF IMMUNOLOGICAL METHODS, vol. 119, no. 1, 21 April 1989 (1989-04-21), pages 19 - 25, XP023973489, DOI: 10.1016/0022-1759(89)90376-1
- [A] S R REDDIGARI ET AL: "Monoclonal antibody to human high-molecular-weight kininogen recognizes its prekallikrein binding site and inhibits its coagulant activity", BLOOD, 1 August 1989 (1989-08-01), pages 695 - 702, XP055346722, Retrieved from the Internet <URL:http://www.bloodjournal.org/content/bloodjournal/74/2/695.full.pdf>
- [A] J. D. PAGE ET AL: "An autoantibody to human plasma prekallikrein blocks activation of the contact system", BRITISH JOURNAL OF HAEMATOLOGY, vol. 87, no. 1, 1 May 1994 (1994-05-01), pages 81 - 86, XP055347009, DOI: 10.1111/j.1365-2141.1994.tb04874.x
- [XYI] F DEFENDI ET AL: "Enzymatic Assays for the Diagnosis of Bradykinin-Dependent Angioedema", PLOS ONE, vol. 8, no. 8, 5 August 2013 (2013-08-05), pages e70140, XP055346505, DOI: 10.1371/journal.pone.0070140
- [XI] M CUGNO ET AL: "Activation of the coagulation cascade in C1-inhibitor deficiencies", BLOOD, vol. 89, no. 9, 1 May 1997 (1997-05-01), pages 3213 - 3218, XP055346366, Retrieved from the Internet <URL:http://www.bloodjournal.org/content/bloodjournal/89/9/3213.full.pdf>
- [XI] M. BERRETTINI ET AL: "Detection of In Vitro and In Vivo Cleavage of High Molecular Weight Kininogen in Human Plasma by Immunoblotting With Monoclonal Antibodies Address reprint requests to", BLOOD, vol. 68, no. 2, 1 August 1986 (1986-08-01), pages 455 - 462, XP055335425
- [XI] JOSEPH K ET AL: "Studies of the mechanisms of bradykinin generation in hereditary angioedema plasma", ANNALS OF ALLERGY, vol. 101, no. 3, 1 September 2008 (2008-09-01), pages 279 - 286, XP026960155
- [Y] SEXTON D J ET AL: "Inhibition of the plasma kallikrein-kinin system activation by DX-2930, a fully human monoclonal antibody inhibitor of plasma kallikrein", JOURNAL OF ANGIOEDEMA, 23 May 2013 (2013-05-23), pages 45, XP055783755, Retrieved from the Internet <URL:https://www.researchgate.net/profile/Jose-Fabiani/publication/261706353_New_abdominal_crisis_trigger_on_patients_with_Hereditary_Angioedema_Jose_E_Fabiani1_Marta_Villaverde2_Fernando_Vazquez/links/00b7d535191e57ecf3000000/New-abdominal-crisis-> [retrieved on 20210309]
- [IY] ZURAW B L ET AL: "New promise and hope for treating hereditary angioedema", EXPERT OPINION ON INVESTIGATIONAL DRUGS, vol. 17, no. 5, 30 April 2008 (2008-04-30), pages 697 - 706, XP055783765, Retrieved from the Internet <URL:https://www.tandfonline.com/doi/pdf/10.1517/13543784.17.5.697?needAccess=true> DOI: 10.1517/13543784.17.5.697

Cited by

WO2024003617A3

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2015061183 A1 20150430; AU 2014340450 A1 20160602; AU 2014340450 B2 20200521; AU 2020217316 A1 20200827; AU 2020217316 B2 20240222; AU 2024203355 A1 20240606; BR 112016008970 A2 20170919; BR 112016008970 B1 20231226; CA 2927824 A1 20150430; CN 105873951 A 20160817; DK 3060582 T3 20201221; EP 3060582 A1 20160831; EP 3060582 A4 20170719; EP 3060582 B1 20200923; EP 3808857 A1 20210421; ES 2837858 T3 20210701; IL 245205 A0 20160630; IL 245205 B 20200531; IL 274055 A 20200630; IL 274055 B 20220201; IL 289514 A 20220301; IL 289514 B1 20230901; IL 289514 B2 20240101; JP 2016536012 A 20161124; JP 2021003114 A 20210114; JP 2022188017 A 20221220; JP 6757252 B2 20200916; JP 7135039 B2 20220912; KR 102432826 B1 20220816; KR 102521947 B1 20230414; KR 20160093604 A 20160808; KR 20220119171 A 20220826; KR 20230054745 A 20230425; PL 3060582 T3 20210504; US 11372002 B2 20220628; US 2016252527 A1 20160901; US 2022291232 A1 20220915

DOCDB simple family (application)

US 2014061247 W 20141017; AU 2014340450 A 20141017; AU 2020217316 A 20200810; AU 2024203355 A 20240521; BR 112016008970 A 20141017; CA 2927824 A 20141017; CN 201480070281 A 20141017; DK 14856778 T 20141017; EP 14856778 A 20141017; EP 20197583 A 20141017; ES 14856778 T 20141017; IL 24520516 A 20160419; IL 27405520 A 20200419; IL 28951421 A 20211230; JP 2016549206 A 20141017; JP 2020144118 A 20200828; JP 2022137393 A 20220831; KR 20167013432 A 20141017; KR 20227027698 A 20141017; KR 20237012295 A 20141017; PL 14856778 T 20141017; US 201415030811 A 20141017; US 202117555636 A 20211220